WHIRRAKEE

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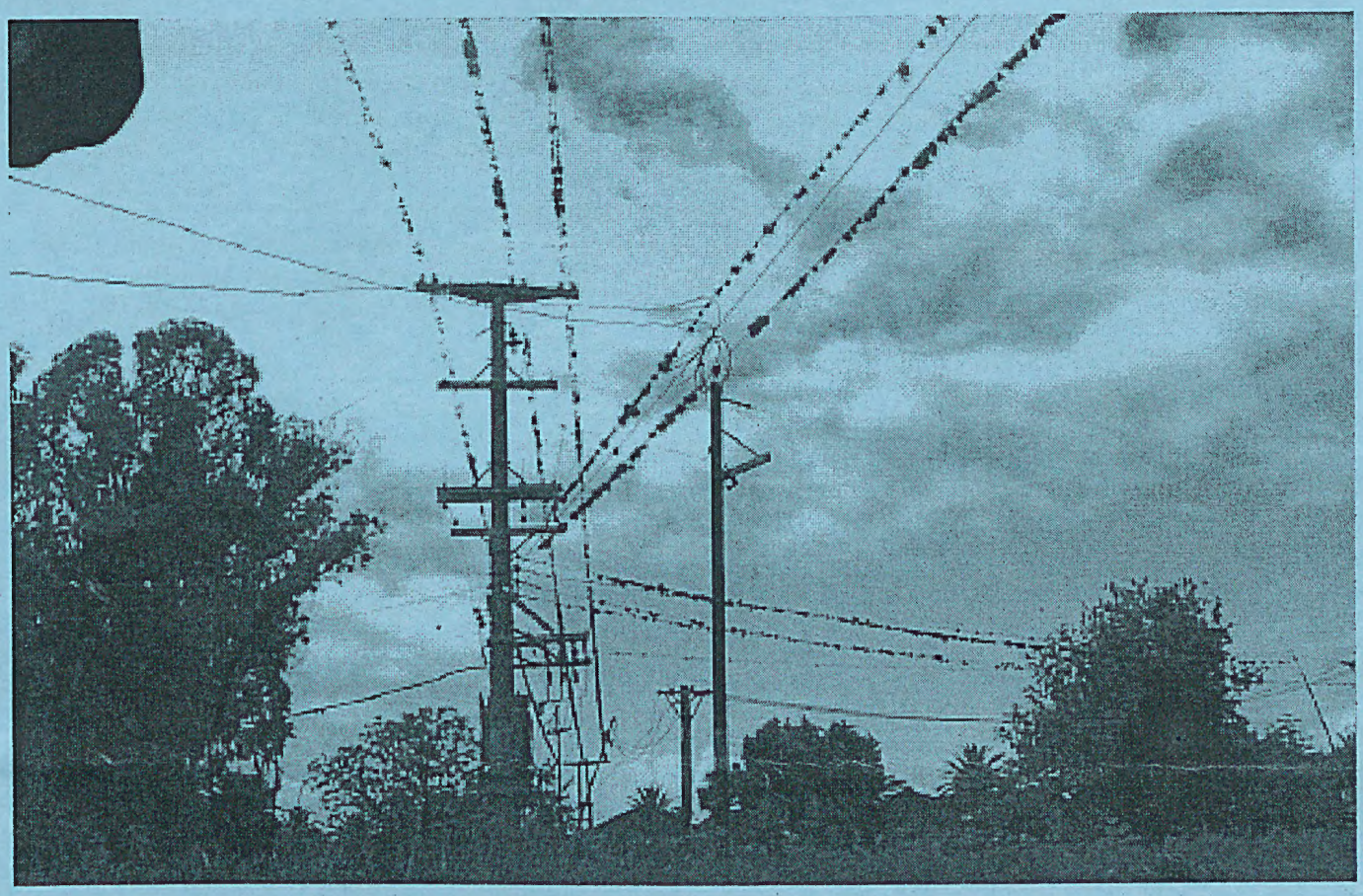

MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.
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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $34; Family $40; Concession: Single $28.50; Family $34. *Whirrakee* subscription only is $34. These rates include GST.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The invited speaker at general meetings starts at 8:00pm and meetings conclude with supper.
If a workshop is held prior to the meeting, it will be advertised and it usually starts at 7.00pm.
The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 7:30pm. Members of the Committee are the Office Bearers listed above, together with the following members:
Barbara Pelczynska, Bob Ruddick, Maurie Stone, Stuart Fraser.

Excursions Excursions are conducted irregularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. In addition to local excursions, campouts are held several times each year, usually coinciding with long weekends or holiday periods.

The Bendigo Field Naturalists Club has two active sub-groups:

Fauna Study Group: meets on the fourth Wednesday of the month at 7:30pm in the Golden Square Senior Citizens Building.
Chairman: John Burtonclay, Fadersons Lane, Mandurang (5439 5710)
Secretary: Bill Holsworth, 13 Nabilla Crs., Bendigo (5443 4063)
Equipment Officer: Maurie Lewis (0407 427179)

Bird Observers Group: meets on the first Wednesday of the month at 7.30pm in the Golden Square Senior Citizen Building.

Front Cover: Photographer: Tom Burton

A mystery picture from Argentina. You have to read Tom's article on page 7 to find out what is perching here....

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club

Vol. 24, No. 4, May 2003

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*) which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles.
Contributions will be included as soon as possible after they are received, although articles received more than one week after the monthly General Meeting will probably be too late for inclusion in the next issue of *Whirrakee*.
Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editor's note
I would like to welcome another member to the club's committee. Darren Green has filled the position of Junior Vice President (Thank you, Darren). His contact details are on page 1.
In this issue we continue two themes, the Echidna theme started by Clive Fisher in the April edition and the Argentina theme started by Tom Burton earlier this year. Glenise Moors pointed out that due to a printing error, Part 1 had never finished. This was a bad oversight on my part, but at least an indication that someone actually reads the articles....The rest of Part 1 is printed on page 7 ahead of the third and final account of Tom's South American experiences. Sorry about that, people.
Lastly, please note that the order of speakers in this year's syllabus has been adjusted. It might not be the last adjustment either, so keep your eyes on the program as the year unfolds.

VALE MORT ANAS

On April 17 2003 Sylvia (or Sylvio) died at Kennington Reservoir after 18 years of parading around the picnic area adjacent to Reservoir Road. She lived alone, un-mated, and seldom approached visitors.

I first met Sylvia one lunch time about 1985 when I stopped to question a kindly middle-aged couple about the contents of a box they had taken out of their car and were carrying it towards the water. They explained it was a duck with a broken wing. I asked to see it, expecting it might be a domestic bird, but was pleased to observe that it was a wild wood duck (*Chenonetta jubata*). This species was not then present at the reservoir so I thought it could do no harm, and would probably die soon anyhow.

Her broken wing dragged close to the ground for the rest of her life; the feathers worn and frayed. She attracted other wood-ducks to take up residence at the Reservoir but she never associated with them or their ducklings. The cause of her death is unknown but she didn't get hit by a car for she never ventured on to the road. Her broken leg indicated that perhaps she was hit by a bicycle. I found her cold, stiff, and carefully laid out on a bed of leaf-litter that someone had pile up. I was tempted to take the body home and examine it more thoroughly but her frayed feathers would not make into a good study skin and she was no longer fresh.

Kennington Reservoir is a lovely place and Sylvia lived a peaceful 18 years on its shores. VALE MORT ANAS (Goodbye to a dead duck).

by Bill Holsworth

Research on Echidnas

Author: Clive Fisher

Further to my article in the March issue, about the hairy echidna I observed at Bruny Island, I have done a little research, and found more information on echidnas.

From Neville W. Cayley's "What Mammal is That", which includes Cayley's excellent illustrations of Australian mammals, and Ronald Strahan's text:

Derivation: *Tachyglossus* - Gk *Tachys*, swift; Gk *Glossa*, tongue;
aculeatus - L. *aculeatus,* spiny.

Status: Four Australian subspecies, all common. *T.a.aculeatus*,wetter regions of eastern mainland; *T.a.acanthion*, north-western mainland and arid areas; *T.a.multiaculeatus,* Kangaroo Island; and *T.a.setosus*. Tasmania.

The illustration of the Tasmanian subspecies in Cayley is of an animal with yellowish fur, through which the tips of all the spines on its back are protruding. Now, the echidna in my photographs, taken at Adventure Bay on Bruny Island, is a creature covered with dark brown fur, through which only a handful of spines protrude. Also, the beak on Cayley's illustration is black, whereas the beak on my friend at Adventure Bay was white.

In the Encyclopedia Britannica (1977), I found this sentence:
"These stocky, virtually tailless, black to yellowish animals have strong-clawed feet and, on the upper parts, spines as well as hair."

Further on, I found this sentence:
"...The other species, *Tachyglossus aculeatus,* found in many habitats across Australia and Tasmania (the latter population sometimes considered a separate species *T. setosus*) is 35 to 53 centimetres long and has spines like a hedgehog's." (prior to the beginning of this sentence, the writer was describing the New Guinea species, *Zaglossus bruijni*, hence the first three words of the sentence "the other species".

Again, from Cayley: "In the late eighteenth and early nineteenth centuries, a number of exploratory voyages centred on Australia, most notably those of d'Entrecasteaux (1792-3), Baudin (1801-3), Freycinet (1818) and Dumont d'Urville (1826-27).
In my article in the March edition, I mentioned that one of the first echidna specimens was taken from Adventure Bay in 1792. This information was printed on a large notice board at Adventure Bay. As d'Entrecasteaux's was the only expedition at Bruny Island in that year, it is almost certain that his expedition obtained it.

I found more information on d'Entrecasteaux's expedition in the Encyclopedia Britannica (1977):
"D'Entrecasteaux (sic) Channel, inlet of the Tasman Sea, extends north-east for 40 mi (65 km) between Bruny Island (east) and the south-east coast of Tasmania, Australia to merge with the River Derwent Estuary....discovered (1642) by the Dutch navigator Abel Tasman, it was surveyed (1792) by the French admiral Bruni d'Entrecasteaux, who proved it to be a channel rather than a bay." From this information, it still seems probable that he found an echidna that year.

With more research, I has become apparent that it was not d'Entrecasteaux's expedition that recorded the echidna at Adventure Bay, but the ship that was responsible was the *Providence*, under the command of one of the most controversial British Naval Officers in history, one William Bligh!
I quote from Troughton (1948):
"One of the earliest records of the Tasmanian Ant-eater is contained in the log of the *Providence* which anchored in Adventure Bay during Captain Bligh's second voyage...The following account appears under the date of 7th February 1792: Lieutenant Guthrie...killed an animal of very odd form. It was 17 inches long, and the same size round the shoulders, to which a small flat head is connected so close that it can scarcely be said to have a neck. It has no mouth like any other animal but a kind of duck bill 2 inches long, which opens at the extremity...the size of a small pistol ball...It has no tail, but a rump, not unlike that of a penguin, on which are some quills about an inch long, as strong as like those of a porcupine. These quills...are all over its back amidst a thick coat of rusty brown hair, but the belly is of a light greyish colour. (MS in the Mitchell Library)"

Also from Troughton (1948):
Tasmanian Spiny Anteater.....
Tachyglossus setosus Geoffrey 1803
The Tasmanian spiny anteater...is larger than the mainland species, from which it is distinguished by having the much shorter spines more or less hidden by fur, a shorter and broader snout, and a lighter colouration; the fur varies considerably, from a dark to a light buffy-brown, and the colour of the head is usually paler than the body. The hind-claws differ in their proportions from those of the mainland form, the third claw being nearly as long and strong as the second and, though intermediate conditions occur, this is no doubt influenced by the fact that the shorter and fewer spines and thicker hair of this species render the single elongated claw unnecessary in performing the toilet"

Two specimens of echidna: the one on the right, from Lismore, NSW, (longer-quilled and shorter-haired?) the one on the left from the Skipton/Beauford area west of Ballarat (shorter-quilled?) Photographer: Ross Laker

From Recher *et al.* (1996) comes this gem:
Echidnas *Tachyglossus aculeatus*...have long spines and short sparse hair in Queensland, but in Tasmania they have short spines and thick long hair. Tasmania is colder than Queensland and the difference in coat seems eminently sensible. Between Queensland and Tasmania there is a gradual change in the amount of hair and spines on echidnas...

From my research and observation, it seems that the echidna is a very interesting animal, having different variations, including a different colour beak from its hair.

References: Encyclopedia Britannica (1977).
Recher, H.F. Lunney, D. and Dunn, I (1996) A Natural Legacy. Sydney: Pergamon Press
Troughton, E. (1948) Furred Animals of Australia. Sydney: Angus and Robertson.

....Editor's note; perhaps the next instalment can be supplied by the fauna group who just had echidnas as their topic....

Noisy Friarbirds at One Tree Hill

by Sue and Stuart Fraser

This month, Noisy Friarbird were observed at our place in Bambara Close beside One Tree Hill at the end of Marine Rd.

First sighting 17/4/03 noon
- Raucous vocalization
- Persistently flying after raven until the raven left.
- Pulled bark off Stringy Bark and ate an insect.
- Left area after half hour.

Second sighting 20/4/03
- 9.30 a.m..... heard calling from two places (2 birds?)
- 10.30 a.m...feeding from medium flowering ironbark
  Wattlebirds & crows close by. Noisy Friarbird quiet
  Vocalization began when other birds left.
- 12.30.....2 Noisy Friarbirds heard. One could be seen vocalizing close by and another could be heard in a tree about 40 metres away.
  The closer one was observed feeding from Ironbark blossoms and cleaning its beak on the branch. Intermittent vocalization, flying from branch to branch and sitting quietly.
- 2.30....heard again

Third day of sighting 21/4/03
- 8.00 a.m....observed on a non flowering Ironbark. Many Wattlebirds noisily came to the same tree. Noisy Friarbird silent and then flew to a flowering Ironbark after the other birds left
  Fed from blossoms. Ravens and noisy Wattlebirds flew in and out of the same tree. Noisy Friarbird still & silent
- 9.30.....some calling but mostly quiet feeding on Ironbark nectar. Shiny beak (covered in nectar?) cleaned on branch .
  On each nectar feeding sighting it was standing, not hanging on a branch.

Know your frog!

by Tom Burton

I have often been asked for information to identify local frogs. The easiest way to recognize what frogs are calling from yonder dam is to use the calls, and an excellent tool for frog identification has now become available to people who have access to the world-wide web.

The following sites both refer specifically to the Victorian frog fauna, which means that you will not have to waste time trawling through irrelevant material.

http://www.frogs.org.au/frogs/ is based closely upon the Frogwatch Field guide to Victorian Frogs. It is very easy to use, even though the sound bites are very short. It has great information--photos, maps, keys, and pie charts to depict seasonal activity. The book was written by three top experts--Murray Littlejohn, from the University of Melbourne, Jean-Marc Hero from Griffith Uni, and Gerry Marantelli, a leading amateur herpetologist.

http://www.museum.vic.gov.au/collections/showcase.asp takes you to the showcase page at the Museum of Victoria. This site has links to accounts of other Victorian fauna besides frogs, including a great links to the butterflies and reptiles of Victoria. This site has bigger photos of the frogs than the other site, and longer call bites (taken from the Frogwatch tape, with introductions by Murray Littlejohn), but the sound can be slow to load up. It has excellent keys if you have the frog in your hand.

Platypus Care

by Sabine Wilkens

A community-based project has been established to map the occurrence of platypus in our waterways. If you know where these animals live or if you have ever seen a platypus, you can contribute to this program and develop a reliable 'snapshot' of the status of platypus populations. You can obtain a copy of a 'Sightings Report' from me (contact detais on page 1) or go to the website: www.platypus.asn.au

Viva Argentina (part 1) by Tom Burton
the missing end (see editor's note page 2).....

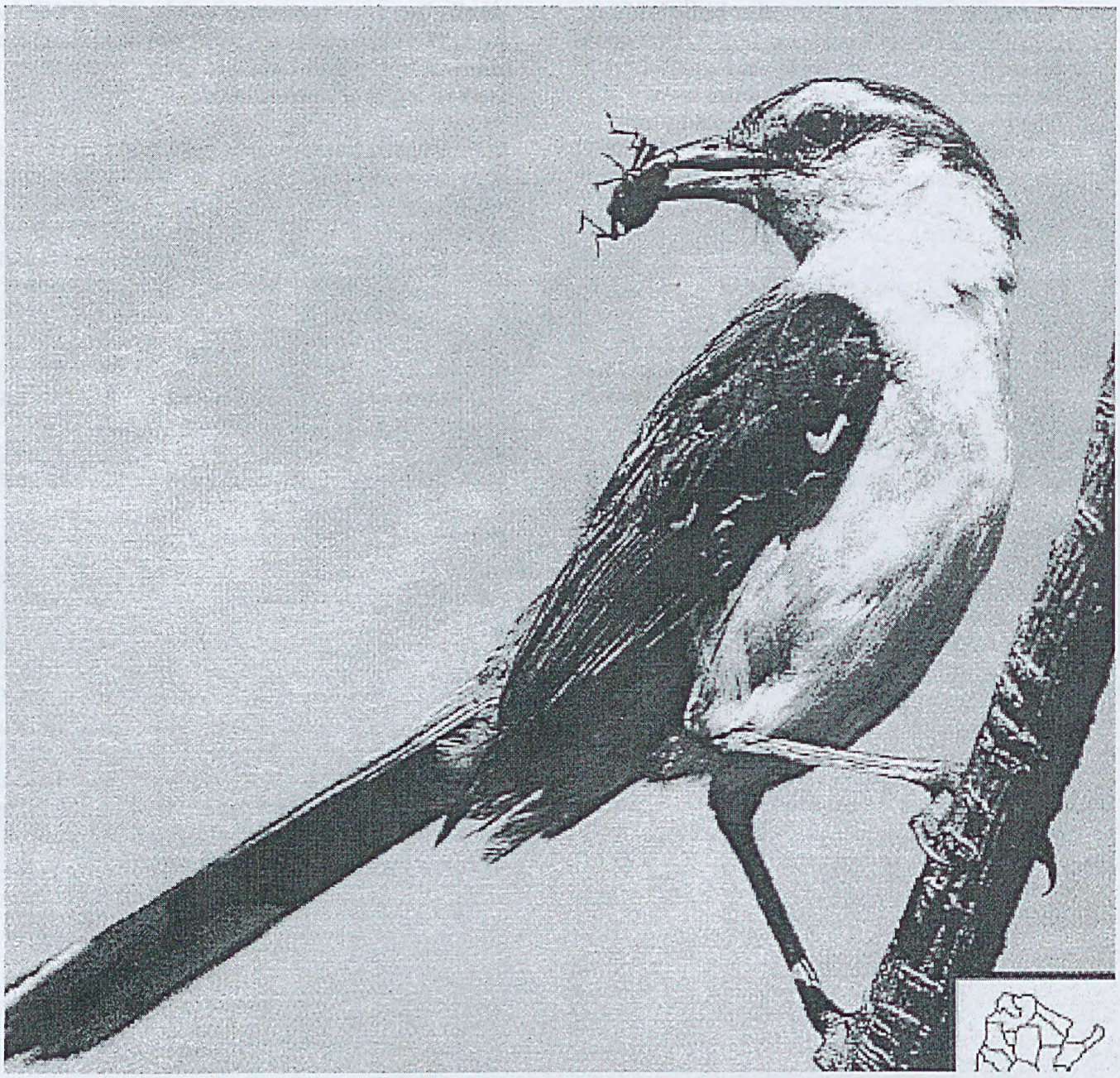
Finally, no car trip is complete without seeing dozens of Teru Tero standing by the roadside. Here is a puzzle for you: can you work out the Australian bird that is closely related to the Teru Tero from Darwin's description?
"The teru-tero ... is another bird which often disturbs the stillness of the night. In appearance and habits resembles in many ways [English] peewits; its wings, however, are armed with sharp spurs, like those on the legs of the common cock. As [the English] peewit takes its name from the sound of its voice, so does the teru-tero." (Voyage of the Beagle, p.108)
Darwin then goes on to describe how the breeding Teru Tero harasses people who come near, how noisy they are, and how they resort to the broken wing trick.

When some colleagues from Argentina visited Bendigo, and heard our Masked Lapwings *Vanellus miles,* they thought that they were hearing Teru Tero *Vanellus chilensis,* so similar are the habits of these two closely related birds. The Teru Tero differs in appearance from the Masked Lapwing in lacking the yellow mask, but possessing a black crest and a black chest and belly.

References

Darwin, CR (1906) The Voyage of the Beagle [1860 edition]. JM Dent & Sons: London.
Narosky, T & Canevari, P (2002) 100 Aves Argentinas. Editorial Albatros: Buenos Aires.
Narosky, T & Yzurieta, D (1987) Guía para la identificación de las aves de Argentina y Uruguay. Asociacion Ornithológica del Plata: Buenos Aires.

Calandria Grande or chalk-browed Mockingbird
(this illustration was mentioned earlier in the March article)



Viva Argentina (3)

by Tom Burton

One morning, as we were driving off to look for frog ponds near the town of Iguazú, we passed a suburban garden that appeared to be full of Hummingbirds. We stopped, and discovered that the garden was festooned with hummer feeders, and that the garden was indeed bubbling with birds. This suburban garden was run as a commercial operation, with an entry fee and the opportunity to buy books with great photos of the Hummingbirds. The fee was worth it.

Philip Crosbie Morrison wrote in the 9th edition of Leach's "An Australian Bird Book" words I have never forgotten, and remember every time I see a Rosella or Red-rump: "...the most beautiful bird of the parrot family is the one you happen to be looking at at the moment." The same may be said of Hummingbirds. Nothing could be as beautiful as the female Black-throated Mango, with its iridescent green back and white belly with a broad black stripe ... until the male comes, totally iridescent blue, purple and green. The Gilded Sapphire and the widespread Glittering-bellied Emerald, which were also present, are well-named—they are flying jewels.

When they are not attending feeders, hummers actually feed from plants. Argentina's national flower is *Erythrina crista-galli,* the Cockspur Coral Tree, which produces big red flowers. Wherever we saw these trees in flower, we found hummers—a great thrill every time. We also saw the Giant Hummer and the Red-tailed Comet (with its long, trailing tail) in the Andes.

We never did find any good frog ponds in the rainforest areas in the province of Misiones. Our quest took us to a farm (mostly corn) owned and run by a family of Guaraní Indians. The man of the family took us on a tour of the forest near his farm (we had to pay for that) ... but he would not reveal the whereabouts of ponds nearby—frogs are on the menu, and he did not want us Yanquis (being Anglo, we were assumed to be Yankees) to go robbing him of good tucker. Ironically, that man (in his thirties, father of a healthy brood of under-tens) wore a River Plate soccer shirt (white, red sash) across which was an ad for Quilmes ("Keel-mess") beer—of which more below.

The north-eastern province of Misiones takes its name from the fact that this tropical area was the site of Jesuit missions during the seventeenth century. If you ever saw the film "The Mission" (Robert de Niro, Jeremy Irons, Ray McNally), then this was the area in which the film was set. I could never watch that film to the end—it is too sad, the more so because it was true. In it, the priests try to save the Indians from the plantation owners, who want to destroy the missions and enslave the Indians. These wealthy people gain the ear of the Pope, who accedes to the closing of the missions and the expulsion of the Jesuits from Argentina.

The ruins of some of these abandoned missions still stand. At San Ignacio, the dormitories can be seen ("equal housing for all ... all goods held in common"), and the town square, and the grand church. Some of the walls of the dormitories and workshops are completely covered in Strangler Fig. Usually, these figs climb up a tree, then put down roots, so that eventually, the original tree is completely encased in fig, and starved of light.

We also visited the Andes in northern Argentina. There the contrast between vegetation on the eastern sides of the ranges (rainforest) and the western sides (desert) is abrupt and dramatic. In the forest areas, everything has something green growing on it. Epiphytic ferns and bromeliads cover every branch. Lianes suitable for Tarzan to swing from are everywhere.

Bromeliads grow even on the power lines (see front cover of this edition). In the cities of the Andes, such as Salta and Tucumán, both about 500 000 population, the presence of bromeliads is taken as a sign of good quality air, and their absence as the opposite. Fuchsias are common understorey plants, wherever the light reaching the forest floor is sufficient. "Indoor plants" are also common in the dark forest floor—plants with broad leaves, green on top, red below, to maximize their ability to use light. The red layer acts as a reflector of any usable light in the red wavelengths that the photosynthetic tissue of the leaf missed the first time through. Thus the leaf gets two chances to us the dim light it receives.

However, within a ten minute drive, you can pass from rainforest to extreme desert, where Cardons, giant cactuses, predominate, and even even places where the rocks are totally bare. The

scenery of the Quebrada de Humahuaca ("Ooma-whah-kah"), north of Jujuy (pronounced "Hoohoowee", accent on the second syllable) has to be seen to be believed, especially around the beautiful little village of Purmamarca, where the bare rocks of "The Hill of Seven Colours"range through reds, purples, browns and greens.

A geographer would love the Andean desert. Structures such as alluvial fans and bajadas and badlands are to be seen everywhere.

Wildlife in the desert is sparse, but at the ruins of the Indian city of Quilmes, we did see a few things. The Quilmes Indians were a tribe that built up the side of a large hill, which they irrigated and fortified. At its peak, 5000 people lived there. For hundreds of years, they managed to stave off Incas intent on expanding their empire southwards. However, they could not hold back the Spanish, and within a short time of Spanish conquest,, the city was a ruin. The surviving Quilmes were taken to Buenos Aires, where they disappeared, by death or assimilation. Now, apart from the ruins, the only memorial to the Quilmes is their name on the brand of very good beer.

At Quilmes, the desert was alive with birds—Caracaras (of which plenty in my first article) and Burrowing Parrots (very drab, brown birds—definitely not the most beautiful parrot to look at, so Crosbie Morrison was wrong this time) were both very common and active, and small owls sat atop the Cardons. Around and on the ruins, Llamas wandered, looking for all the world like humpless camels – which they are (see photo below). I would have liked to have stayed in the small tourist hotel and explored the place better.

Finally, a highlight in the high Andean desert. The road was above 3000m—higher than Mt Kosciusko—and the surrounding mountains (to 6000m) were enshrouded in mist, from which emerged four or five Condors, which circled into and out of the mist (which is why I could not be sure how many there were. We could easily see their long, finger-like primary feathers, and their white collars. If we had not seen a single hummer or woodpecker on our trip to Argentina, the Condors would have made the trip worth while. Such majesty, such grace.

I loved Argentina. In the short time I had available for tripping about, I could not see more than a small area of the country, but what I did see was rich in interest from the points of view of the wildlife and plants, and also the people we met. We were fortunate to have had Pablo (a botanist and geographer) and Adriana (a zoologist) as our guides, both keen to practise their near-perfect English with us. Would I go back? Try and stop me!

Regional Catchment Strategy 2003-2007 Future Directions

A comment by Anne Bridley

Dear Sir/Madam,

I wish to comment on the Regional Catchment Strategy 2003 – 2007 Future Directions Paper with regards to Fauna and Vegetation.

My comments come from my experience as:

• Regional Organiser for Birds Australia's Atlas of Australian Birds, Bendigo Area for three years
• A member of the Bendigo Field Naturalists Club since 1988
• Resident in a rural residential area since 1991
• Participant in bird surveys and over a decade of record-keeping of bird species in my area.

As noted in your paper, local population is increasing, and is likely to continue to increase. Your paper also notes the threat to flora and fauna from habitat fragmentation (p5).

Box-ironbark forest on private land comprises a significant proportion of total forest cover in the Bendigo area. One of the biggest threats to local biodiversity is the destruction of this native vegetation for residential developments. This is still continuing.

The destruction comes at all stages of the development:

• When the roads and services are put in – this may affect roads quite some distance from the actual development as rural roads are upgraded. Mature trees may be removed.
• During the construction of dwellings and other buildings
• Ongoing removal of vegetation by residents for gardens, lawns, fire protection, horses. This last phase tends to take some years. I believe that although most local residents now understand the importance of trees, they don't place a high value on the retention of understorey vegetation. The replacement of native vegetation by lawns and exotic plants has been facilitated by reticulated water in some bush bock areas.

My own observations in an area mostly divided into 2 to4 Ha blocks suggests that development leads to the loss of the most sensitive bird species such as Crested Bellbird once roads are in and some blocks are occupied. Smaller ground-dwelling species are lost as more dwellings are constructed, understorey is cleared and cats increase. By the time most of the blocks are occupied, a number of ground using breeding species have gone and birds such as Noisy Miner which enjoy a more fragmented or open habitat are increasing. The dry years which occurred in the 1990s may have contributed to this. However, fragmented and degraded environments would be expected to be less resilient to climatic stresses.

The loss of native vegetation, except for some trees tends to be almost total on smaller blocks (less than 1 Ha). Even on blocks of 2Ha it is common for at least half the understorey to be removed and often all of it.

All this occurs despite vegetation clearance control legislation, vegetation overlays and the efforts of the City of Greater Bendigo's Environmental Officer.

The above situation has been contributed to by the following:

• Vegetation clearing legislation which allows clearing for housing
• The continued granting of planning permits for forested areas for residential development by the City of Greater Bendigo. This is occurring when there are still vacant blocks of cleared land.
• Clearing for residential development right up to the borders of conservation reserves (such as One Tree Hill block of the Greater Bendigo NP) at Spring Gully. Token replanting of local species along the roadsides of the development is not a sufficient replacement of what has been lost.
• An over-reliance on inadequate planning schemes, vegetation overlays and post-development replanting to control clearing and preserve biodiversity. Vegetation overlays to protect medium to high quality vegetation are not being sufficiently used.
• Inadequate monitoring and enforcement of existing clearing controls and a lack of knowledge by residents of those controls.
• Community attitudes towards native vegetation and ignorance about the importance of understorey and the ground layer in maintaining the biodiversity of the wider Bendigo area.

The public plantings by the Bendigo Council of

exotics, such as the agapanthus (from South Africa) on the McIvor Hwy in front of the Greater Bendigo NP, presumably reflect the importance the Council puts on native vegetation.
• The natural public desire to make their homes safe from fire by clearing native vegetation. This desire can extend to clearing adjacent roadsides.
• Unsympathetic planning appeals tribunals, the members of which do not always appear to have a sufficient appreciation of the value of native vegetation.

If the current situation is allowed to continue and the local population continues to grow, then eventually most native vegetation on private land close to Bendigo will be either destroyed or greatly modified and degraded, to the detriment of many of the declining species which rely on our box-ironbark forests.

I believe that the North Central Catchment Authority needs to give a high priority to solving this problem if it is serious about its aim of preserving the key asset of the region's biodiversity.
This will need to be done at State Government, local government and community levels to overcome some of the problems outlined above. I'm glad to see that the problem of biodiversity on rural residential land is recognised (p55). However, prevention is much more effective and cheaper than cure. Given this, the first priority is to stop subdivision on forested land and shift it to land already cleared.

I am also concerned about the effects that the current fire regime may be having on local flora and fauna in the absence of enough knowledge about location of fire-sensitive species and the effects of fire on different species. As the spread of urban and peri-urban developments increase pressure for more fuel hazard reduction burning, it is important that more funds be allocated for study into the effects of different fire regimes on local flora and fauna. I recently gave the Department of Sustainability and Environment some information about areas that were inhabited by ground-dwelling birds that may be affected by burning. I was happy to do so, but it seems to me that a more co-ordinated approach in getting information to those doing works on the ground is needed.

A weed problem which is concerning me is the spread of Pampas Grass in the Mandurang block of the Greater Bendigo NP along seepage from water channels. Stopping this seepage would conserve water and reduce the spread of this weed.

I would like to thank members of the North Central Catchment Management Authority for this opportunity to contribute.

Yours sincerely

Anne Bridley

Wanted – Egg Collections

Wayne N.W. Longmore
Collection Manager, Birds and Mammals
Museum Victoria, GPO Box 666E, Melbourne Vic 3001
ph: 03 8341 7452 fax: 03 8341 7442
www.museum.vic.gov.au or wlong@museum.vic.gov.au

Editor's note: Wayne Longmore originally sent this request to Peter Johnson (NRE, now DSE) who sent it on to Bill Holsworth who sent it to the Whirrakee.

I am trying to trace some information on a rumour I received here a couple of weeks back. Apparently in the not so distant past someone located a collection of birds eggs in their garage and informed either your department directly or via the local Victorian Naturalists Club. I am involved in a couple of ways. First, as Collection Manager of such items here at the museum I have an avid interest. Secondly, I am co-researching egg collections across the entire country. In this latter project we are attempting to put together a history of the various collectors, where they operated, what they gathered, and how these data may be useful in future and current studies of avian biodiversity.

Can you shed any light on the collection. From what I was told it was sent to a local museum. My enquiries at the Bendigo museums has drawn a blank. Maybe my informants got it wrong and it has ended up here. As I have only been here for the last two ?, I would not be at all surprised if there was something here that I have yet to locate.

If you could find out if anyone knows of this collection I would be grateful to hear any detail.

April General Meeting - 'Habitat rehabilitation for River Blackfish' Speaker: Jon Leevers

Author: Sabine Wilkens

Jon Leevers, is working on the improvement of river habitat to ensure the survival of native Blackfish; he is employed at the North Central Catchment Management Authority, Huntly and this project was conducted jointly with the Arthur Rylah Institute.
The main project work, has been completed but monitoring is ongoing. It had three aims.

- to determine the effect of increasing in-stream habitat by providing additional large woody debris
- to secure the existing population of River Blackfish
- to educate the population about stream habitats and Blackfish ecology.

River Blackfish, *Gadopsis marmoratus*, was once common throughout Victoria but the populations have declined in many places, largely due to water management. It is a secretive species which hides behind logs and lays their eggs in hollow logs and thus needs a high degree of in-stream habitat to survive. The fish spawn when the temperature gets above 16.5°C and the male guards the eggs. Blackfish feed on aquatic insects and small invertebrates.

The project has been carried out at Birches Creek near Clunes. Birches Creek flows into Tullaroop Creek which, in turn, flows into the Loddon. The creek was chosen as it is in relatively good condition. Three reservoirs above serve to ensure a more or less constant flow throughout the year.

In the past, River Blackfish was the predominant fish caught in this creek. Other species found there by fish surveys were Australian smelt, Mountain Galaxias and Flat-headed Gudgeon (native species) as well as the introduced Brown Trout, Redfin and Roach. Trout, for example, is a serious predator of Blackfish.
In his talk, Jon discussed the various stages of this project in turn:

Pre-project planning and assessment

Before the project was even started, the willow population at the site had to be managed and a number of baseline surveys had to be done.
The entire project site is about 2.5km long running along Birches Creek downstream of Nelson Bridge. Initially this was surveyed for native and exotic vegetation, in particular the presence of willows. Some willows were removed to give the native vegetation a chance to grow back. Some willow tops were removed but the stumps left standing. This was done because blackfish were seen amongst uprooted willows. Other willows were left standing for the purpose of providing shade and general habitat. Several follow-up visits were conducted to poison re-sprouting willows. 13000 groundcover shrubs and tree species were planted and significant natural regeneration of River Red Gums has since gone on.

The blackfish habitat rehabilitation site was only about 350m in length and along this site, every 10m a cross-section of the stream profile was surveyed. This was to give detailed stream flow and topographical information. Data about existing large woody debris in the channel was also collected. It was found that prior to the study there were approximately 0.01 m^3 of woody debris per m^2 or water surface, a loading considered to be normal (but on the low end) for Australian streams and one that might have been similar prior to european settlement.

The initial fish survey was conducted using an electro-fishing technique (this stuns the fish in a particular section of the creek enabling them to be counted). River Blackfish densities varied extensively along the entire project site (from 0 to 129 fish per 100m section) but was highest in the habitat rehabilitation site.
A macro-invertebrate survey was also conducted.

Placement of Large Woody Debris

Finding large woody debris for the purpose of re-snagging a stream is not easy. However, a nicely timed disaster elsewhere did provide this. A significant flood event uprooted many large trees in the Vaughan Springs Reserve in October 2000. As these had to be removed for the sake or public safety anyway, they were quickly claimed by this project. In total 60 large pieces of wood with average length of 8m were placed into Birches Creek in May 2001 according to the principles of increasing complexity, avoiding the cerating of shallow areas and not increasing the woody debris per cross-section to more than 10% (as this then does not seem to change the flood incidence).
Logs were places at 20 to 40° angles to the direction of flow and were anchored down. All

up this increased the large woody debris content from 0.01m^3 per m^2 to 0.026m^3 per m^2 of water surface. Certain areas of aquatic vegetation were avoided for the purposes of habitat protection, particularly for the growling grass frog. As far as possible, woody debris was placed in such a way as to provide hollows on the downstream or sheltered side to maximise their potential as spawning sites.

Placement of Spawning Tubes

Lengths of PVC pipe were attached to star pickets with a pulley (the dimensions of the pipes were 400m long and either 50 or 75mm in diameter). The set-up was such that tubes could be recovered regularly to check for egg laying. In total, 200 such tubes were placed into the creek. Students from Wesley College and primary schools from Smeaton and Clunes were involved in measuring water temperatures to predict likely spawning times (water temperature must be above 16.5^{o}C).

Education

Many local schools, LandCare groups, recreational fisher-people and landholders have been involved in the project. Field days have been held on which the technique of electro-fishing was demonstrated. The children's television program "Totally Wild" was at the scene at some stage and workshops on riparian vegetation and aquatic habitat have been based on the program. Schools will be involved in the continuous monitoring of water temperatures and the site will also be used in the future by NCCMA for field workshops.

Outcome for the Blackfish

The outcome for the Blackfish are not known yet as follow-up surveys of the fish population and egg laying have not been conducted. It is certainly hoped that the numbers will increase and that the population will become more robust through these measures.

However, the outcome for the whole creek already are an overall improvement of stream quality for all inhabitants. Revegetation with native species provides habitat, shade, leaf fall and of the newly planted trees, some will eventually replace the artificially placed woody debris.

What a fantastic project! We don't often have talks on fish - I learnt such a lot! Thank you Jon

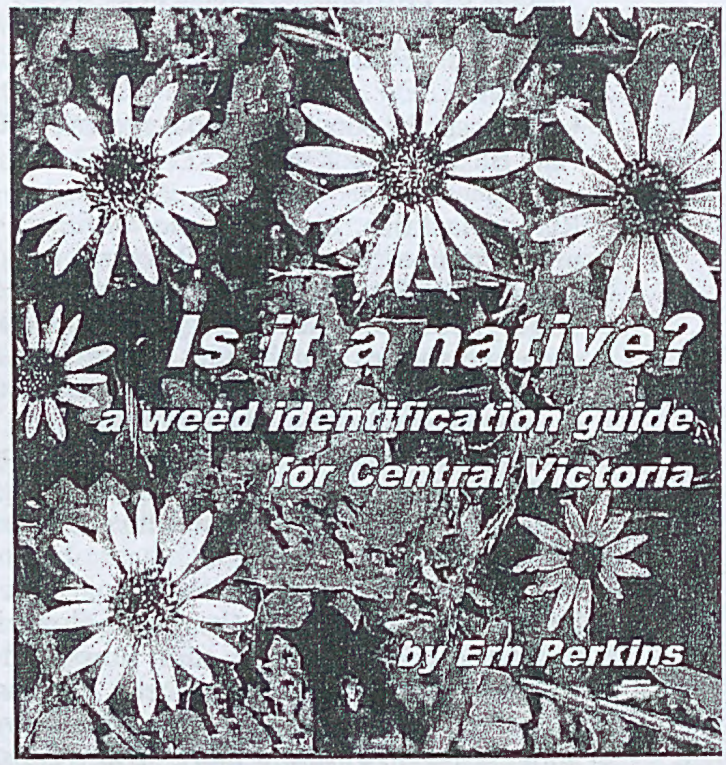
Reference: NCCMA (2002) Birches Creek, Habitat Rehabilitation for River Blackfish. NHT & DNRE.

Is it a Native?

A Weed Identification Guide for Central Victoria

A CD produced by the Castlemaine Field Naturalist Club, Mount Alexander Shire and North Central Catchment Management Authority

Editor's comment: I purchased this CD at the last general meeting for $ 5.00 and have found it excellent value. I have now been told Bill Holsworth has obtained another lot and will sell these at the next meeting, alternatively, an order form is printed on the back page. Highly recommended!



The purpose of this publication in CD format is to assist with weed identification in the Central Victorian Region. It is written for landholders, landcare members and anyone wishing to revegetate land or to replace introduced plants with natives local to the area. A weed is therefore defined as any plant that is not a local native.

The CD includes weeds and some native plants that are sometimes mistaken for weeds.

Bendigo Field Naturalists Club Inc.
Guest Speaker Syllabus for General Meetings 2003
Second Wednesday 8:00 pm

Please check each **WHIRRAKEE** for additional events or changes.
If a workshop is planned, it will start at 7:00pm. The speaker will be introduced at 8:00 pm.
If there is no workshop, the general meeting will start at 7:30pm, with the speaker being introduced at 8:00pm.

Date - 2001	Topic	Speaker
May 14	'Beauty in Miniature' - An introduction to Lichens and the importance of cryptogams, based on Dr Ralston's research & collection work on Lichens in the field and at the Herbarium.	Kathleen Ralston
June 11	'First impressions of the environment of the Mount Alexander goldfields.' It is sometimes assumed that early European arrivals in this region were uniformly destructive and unappreciative of natural values. Deirdre will explore this assumption by looking at the first impressions of the miner/writers Howitt, Fauchery and Sherer of the goldfields in the 1850s.	Deirdre Slattery
July 9	'The recent bushfires in the Victorian Alps and the process of recovery.'(watch out!, this talk contains some chemistry)	Michael Angove & Daniel Bennett (La Trobe University, Bendigo)
August 13	'Recognition and conservation of sites of geological significance': (examples from the Bendigo region; alpine Australia and the Newer Volcanic Province).	Neville Rosengren
September 10	AGM: 'Ups & downs of BFNC's Conservation campaigns'- A biased and selective Report Card of some of our Club's activities.	
October 8	'Classification of Threatened Fauna in Victoria - definition & assessment of 'Threatened Fauna'; what it means to be on the list.'	Peter Menkhost (Arthur Rylah Institute)
November 12	'The importance of Environmental Flows in rivers, streams and wetland areas.'	Paul Sinclair (Environment Victoria)
December 10	Christmas Dinner 'Birds of the Box-Ironbark Forest'	Chris Tzaros

Diary

The General, Bird Observers Group and Fauna Study Group meetings are held at the Golden Square Senior Citizens Building, Old High Street, Golden Square, unless otherwise indicated.

General Meeting

Wednesday, May 14 **7.30pm**

The speaker will be Kathleen Ralston and her talk is entitled, 'Beauty in Miniature'. It is an introduction to Lichens and the importance of cryptogams, based on Dr Ralston's research & collection work on Lichens in the field and at the Herbarium.

Bird Observers Group
This group meets (in the clubrooms) on the first Wednesday of the month at 7:30pm. Please confirm with Kerrie Norris (ph 54478017)

Fauna Group
This group meets (in the clubrooms) on the fourth Wednesday of the month at 7.30pm. The next meetings are on:

Wednesday, May 28
Skinks - Darren Green (plus some mystery slides by Rob Watkins)

Excursion June 15
Excursion to check local nest boxes. Contact: Kerrie 54478017 or Maurie 0407 427179.

Wednesday, June 25
Bandicoots - Kerrie Norris

Wednesday, July 23
To be announced

Wednesday, August 27
To be announced

Wednesday, September 2
A.G.M. plus topic of interest to be announced.

Wildlife Rescue & Information Network Inc.
W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals.
It is fully endorsed by the Dept of Natural Resources and Environment.
Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 356433.

ORDER FORM

"Is it a Native?" by Ern Perkins

The cost of the CD is $5.00 or $7.00 posted. It requires Acrobat Reader V 4 or 5. A copy of V 5.1 for Windows is included on the disk.

For postal orders please provide the following details and send this form to:

Castlemaine Field Naturalists Club Inc.
PO Box 324
Castlemaine Vic 3450

Name:.....

Address:.....

.....

.....

Telephone:.....

Number required:.....

Payment encl. ($7.00 per copy):.....

Please make cheques payable to Castlemaine Field Naturalists Club Inc. (no A0003010B)

The disk may also be purchased over the counter from: Mount Alexander Shire Council, 25 Lyttleton Street, Castlemaine, Vic 3450, 9.00 am-4.45 pm.